140

22 October 1958

REPORT ON K-302

These experiments were carried out (a) to determine if K-302 and a crude preparation of a fungus would induce psychic changes in man, (b) to determine the dose range necessary to elicit a reaction, and (c) to obtain information on the clinical characteristics of the reaction.

Methods: Eleven Negro male former addicts who were in good physical and mental health served as subjects. All these patients were familiar with the effects of marihuana, LSD, and were accustomed to the experimental environment.

General Conditions: All experiments were conducted in a special ward. Men entered the ward on the night preceding the test. They were awakened at 6 a.m. Drugs were given orally with the patients fasting. Patients were observed after 10 minutes rest in bed but were free to mingle with other patients during intervals between observations.

Measurements: The following measurements were obtained at hourly intervals once before, and eight times after administration of the drug:

1. rectal temperature;
2. systolic and diastolic blood pressure;
3. pulse rate;
4. respiratory rate;
5. pupillary size;
6. threshold for kneejerk;
7. LSD questionnaire;

B-6

8. notes on behavior.

Drugs: K-302 was dissolved in 3-5 cc. of ethyl alcohol, and diluted in distilled water to 30 cc. The crude fungus was dispersed in water, using a Waring blender. Placebo was spinach ground in water in a blender to simulate the appearance of the crude fungus.

Doses used are shown in the tables attached which also give a qualitative assessment of the results on the various measurements. In addition, data on patients receiving 2.5 grams or more of K-302 (4), or 15.0-20 grams of fungus (5) were analyzed and averaged according to the system used in assessing LSD effects.

Results: K-302. Pupillary dilatation was noted in every case even with a dose of 0.3 grams. Change in blood pressure and knee jerks did not seem significant until 2.5-3.0 grams were given. Subjective effects were not noted consistently until 2.5-3.0 grams were given. All 4 patients receiving these amounts became elated, silly, and giggled. They reported nervousness, vague fears, changes in body sensation (numbness, light, etc.). One (Foster) gave a picture very similar to LSD (euphoria, silliness, visual distortion, depersonalization, lights, colors, etc.).

Crude Fungus. Definite changes in blood pressure, pupils and kneejerks were observed with doses of 10-20 grams. All patients receiving 15-20 grams had subjective effects, most frequently described as being those of marihuana. The LSD pattern (anxiety, perceptual distortion, hallucinations) were seen in 3.

Placebo. All results were negative.

COMMENTS

The results warrant the statement that both the crude fungus and K-302 have sympathomimetic activity and will induce psychic changes in man. The data are not sufficient to characterize the reaction completely or to assess with any exactness the relative potencies. About 2.5-3.0 grams of K-302 seems roughly equivalent to 10-15 grams of the crude material.

Plans: See letter.

B-6

K-302

Man	Dose	Pupil	BP	KJ	Subjective
[redacted]	0.3	+	0	0	"Different"
[redacted]	0.4	+	±	0	0
[redacted]	0.5	+	±	±	Relaxed, nausea
[redacted]	0.6	+	0	±	0
[redacted]	0.7	+	0	0	0
[redacted]	1.0	+	0	±	0
[redacted]	1.25	+	+	+	Nervous, keen hearing, etc.
[redacted]	1.5	+	0	±	0
[redacted]	2.0	+	0	0	0
[redacted]	2.0	+	±	0	0
[redacted]	2.5	+	±	+	Nervous
[redacted]	3.0	+	±	+	Nervous
[redacted]	2.5	+	+	+	Euphoric, sill LSD-like
[redacted]	2.5	+	+	+	Nervous, skin sensitive

BP - Systolic blood pressure

KJ - Threshold for kneejerk

\+ - Indicates that measurement judged positive by inspection

B-6

Crude Fungus

Man	Dose-Grams	Pupil	BP	KJ	Subjective
[redacted]	5.0	±	+	+	Relaxed, differen
[redacted]	10.0	+	+	+	0
[redacted]	15.0	+	+	+	Giggles, arms hea elated, no hallu- cinations
[redacted]	15.0	+	±	+	Relaxed, legs num
[redacted]	15.0	+	+	0	Relaxed, drowsy, LSD-like
[redacted]	20.0	+	+	+c	Nervous, "reefer, lights, LSD-like
[redacted]	20.0	+	+	+	LSD-like

Placebo - Spinach

[redacted]	0	0	0	0
[redacted]	0	0	0	0
[redacted]	0	0	0	0
[redacted]	0	0	0	0

B-6

AVERAGE CHANGES IN PATIENTS RECEIVING 2.5-3.0 GRAMS K-302, 15-20 GRAMS OF CRUDE FUNGUS AND PLACEBO.

Drug	Number Patients	Pupillary Diameter[x]	Systolic Blood Pressure[x]	Knee Jerk[x]	Number Questions
K-302	4	+ 7.6	+ 69	+ 9.1	18
Crude Fungus	5	+ 9.5	+ 51	+ 8.9	48
Placebo	4	+ 4.3	+ 3.0	- 2.5	0
LSD, 1 mcg./kg.	6	+ 17	+ 93	+ 9.2	50

X = Represents areas under time action curves.